

REMARKS

Claims 1-47 are currently pending in the subject application and are presently under consideration. Claim 47 has been amended as shown at page 9 to address the objection to this claim – withdrawal of this objection is respectfully requested.

Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

I. Rejection of Claims 38 and 39 Under 35 U.S.C. §101

Claims 38 and 39 stand rejected under 35 U.S.C. §101 for lacking utility. This rejection should be withdrawn for at least the following reasons. Claims 38 and 39 produce a useful, concrete and tangible result, and further, the subject claims pertain to transmission of software code between two or more computer processes.

Because the claimed process applies the Boolean principle [abstract idea] ***to produce a useful, concrete, tangible result*** ... on its face the claimed process comfortably falls within the scope of §101. *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352, 1358. (Fed. Cir. 1999) (Emphasis added); *See State Street Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368, 1373, 47 USPQ2d 1596, 1601 (Fed.Cir.1998). The inquiry into patentability requires an examination of the contested claims to see if the claimed subject matter, as a whole, is a disembodied mathematical concept representing nothing more than a "law of nature" or an "abstract idea," or if the mathematical concept has been ***reduced to some practical application rendering it "useful."*** *AT&T* at 1357 citing *In re Alappat*, 33 F.3d 1526, 31 F.3d 1544, 31 U.S.P.Q.2D (BNA) 1545, 1557 (Fed. Cir. 1994) (emphasis added).

The Examiner contends that the steps of claims 38 and 39 *consist solely of a data field or a data packet to be transmitted and analyzing steps that do not produce a tangible result*. Applicants' representative disagrees and submits that the Office Action misconstrues the requirements necessary to fulfill the conditions for patentability under 35 U.S.C. §101. According to *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352 (Fed. Cir. 1999), the standard set forth by the Federal Circuit for determining whether claims are directed towards statutory subject matter is whether the claims as a whole can be applied in a practical application to ***produce a useful, concrete and***

tangible result. It is the result of the claims as applied in a practical application that is germane to the determination of whether the claims are directed towards statutory subject matter, not whether the underlying means by which the result is effectuated that should be tangible, as intimated in the Office Action. It is believed therefore that the subject claims clearly satisfy this legal standard. In particular, independent claim 38 recites: *a data packet adapted to be transmitted between at least two computer processes, comprising a data field comprising information for regulating operation of a business component based at least upon prognostic data concerning a machine.* Claim 39, in addition to reciting the acts of “analyzing” noted in the Office Action, also recites *specifying machine acquisition based at least in part upon the analyses.* Thus, claims 38 and 39 elicit a series of independent acts that culminate in a useful, concrete and tangible result.

Additionally, the Court of Appeals for the Federal Circuit stated in *Eolas Techs., Inc. v. Microsoft Corp.*, 399 F.3d 1325 (Fed. Cir. 2005):

Title 35, section 101, explains that an invention includes “any new and useful process, machine, manufacture or composition of matter.” ... Without question, *software code alone qualifies as an invention eligible for patenting under these categories*, at least as processes. *Id.* at 1338 (emphasis added).

The subject claim 38 clearly pertains to software code comprising a data field having regulating instructions, encapsulated in a data packet transmitted from one computer process to another computer process, so that the regulating instructions therein can be employed to regulate the operation of a business component based at least upon prognostic data concerning a machine. The fact that (i) the data packet that encases the software code during its transmission between two processes, or (ii) the data packet is transmitted as a communication signal between two processes is irrelevant to the fact that it is software code that is contained therein and is being transmitted through utilization of a communication signal. It is submitted that all that is relevant is the fact that software code is being transmitted within the data packet, and that the software code so transmitted produces a useful, concrete and tangible result. In view of at least the aforementioned reasons, the rejection of claims 38 and 39 should be withdrawn.

II. **Rejection of Claim 38 Under 35 U.S.C. §102(e)**

Claim 38 stands rejected under 35 U.S.C. §102(e) as being anticipated by Bryant *et al.* (US 2004/0236450). This rejection should be withdrawn for at least the following reasons. Bryant *et al.* does not disclose or suggest every limitation set forth in the subject claims.

A single prior art reference anticipates a patent claim only if it *expressly or inherently describes each and every limitation set forth in the patent claim*. Trintec Industries, Inc. v. Top-U.S.A. Corp., 295 F.3d 1292, 63 USPQ2d 1597 (Fed. Cir. 2002); See Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The *identical invention must be shown in as complete detail as is contained in the ... claim*. Richardson v. Suzuki Motor Co., 868 F.2d 1226, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989) (emphasis added).

Claim 38 recites *a data packet adapted to be transmitted between at least two computer processes, comprising a data field comprising information for regulating operation of a business component based at least upon **prognostic data** concerning a machine*. Bryant *et al.* does not disclose or suggest these novel features.

Bryant *et al.* relates to a method of diagnosing state of a system in which a measured signal is compared to an expected signal, and the comparison is used to perform the diagnosis. The Office Action cites the Abstract and paragraphs [0114]-[0122] and [0125]-[0132] of Bryant *et al.* Contrary to assertions in the Office Action, Bryant *et al.* does not disclose or suggest at these paragraphs, let alone anywhere in the document, the claimed subject matter as indicated above. Rather, these cited sections merely disclose a method for assembling a model having correspondences with a physical system. The system is monitored so that the model parameters may be tuned to mimic the real system, whereupon the model can be manipulated to study behavior of the system. A system diagnosis is obtained by measuring “noise” in the machine, *i.e.* the difference between the actual signal as measured from the machine, and the expected signal. In the Abstract *inter alia*, Bryant *et al.* states that the model may have parameters,

associated with features and/or faults of the system, that are used in diagnosing the state of the system, and that “selectively repeated diagnosis over time may yield a prognosis of the system.” Paragraph [0122] adds that “a prognosis may predict the failure of a part.” It is clear that Bryant *et al.* can only be used to model the current state of a part in a system and observe a trend, which is very different from the claimed invention in which probabilistic and statistical techniques are used to infer a prognosis of the *future* state of an *entire* machine. It is therefore readily apparent that Bryant *et al.* fails to disclose or suggest anything concerning *regulating operation of a business component based at least upon prognostic data concerning a machine*. Therefore, Bryant *et al.* fails to disclose “every aspect of the claimed invention” and for at least these reasons, the rejection of claim 38 should be withdrawn.

II. Rejection of Claims 1-37 and 39-47 Under 35 U.S.C. §103(a)

Claims 1-37 and 39-47 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Gotou *et al.* (US 2002/0013635 A1) in view of Bryant *et al.* This rejection should be withdrawn for at least the following reasons. Gotou *et al.* and Bryant *et al.*, taken alone or in combination, do not disclose or suggest every limitation set forth in the subject claims.

To reject claims in an application under §103, an examiner must establish a *prima facie* case of obviousness. A *prima facie* case of obviousness is established by a showing of three basic criteria. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, *the prior art reference (or references when combined) must teach or suggest all the claim limitations*. See MPEP §706.02(j) (emphasis added)

Applicant’s invention of claim 1 relates to a *system that facilitates optimizing industrial business operations*, including a *prognostics engine that infers at least one future state of the operations based in part on the received data* and includes: *a plurality of intelligent software agents that serve as proxies for at least the subset of machines, for*

modeling and representing interactions with one another, and for facilitating convergence on modification and control of the subset of machines, for efficiently optimizing industrial business operations. Independent claims 10, 33, 44 and 47 recite similar limitations. Gotou *et al.* and Bryant *et al.*, taken alone or in combination, do not disclose or suggest these novel features of applicant's claimed invention.

Gotou *et al.* relates to a system for monitoring the status of abnormality and lifetime of machine components such as a bearing having rolling elements. With respect to claim 1, the Office Action incorrectly asserts that Gotou *et al.* discloses a system having a component for receiving data relating to a subset of machines, and a diagnostic engine to diagnose a subset of operations based on the received data, citing paragraphs [0011], [0012], [0013], [0051] and [0052]. However, these cited passages simply disclose a system capable of remotely monitoring and determining status of machine components sold to a client corporation, for estimating lifetime of these components. A machine component monitoring and diagnosing system is disclosed therein that includes "a sensor for detecting a factor associated with lifetime of a machine component." The sensor data is transmitted to a remote business establishment, where it is received by "a diagnosing means for diagnosing the status of the lifetime of the machine component." It should especially be noted that Gotou *et al.*'s "diagnosis" relates to monitoring wear of components such as roller elements and other such high-friction parts. Abnormalities in sensor signals are used to predict part failure based on the current state of element. In this way, the business establishment can remotely diagnose and monitor the status of machine components at a client corporation.

The Office Action concedes that Gotou *et al.* fails to disclose or suggest a *prognostics engine* as recited in the subject independent claims. For this purpose, Bryant *et al.* is brought in. However, as discussed *supra*, Bryant *et al.* also fails to disclose or suggest these novel features. Bryant *et al.* relates to a method of diagnosing state of a system in which a measured signal is compared to an expected signal, and the comparison is used to perform the diagnosis. The Office Action cites the Abstract and the first two paragraphs of the Summary. Contrary to assertions in the Office Action, neither these cited sections nor the remainder of this document disclose the claimed invention. Instead, as noted above, the document discloses a method for modeling a

physical system in which the system is monitored, and a system diagnosis is obtained by measuring difference between the actual signal as measured from the machine, and the expected signal. As discussed *supra*, Bryant *et al.* simply repeatedly performs a diagnosis to predict a failure of a part based on a model of the current state of a part in a system, which is very different from the probabilistic and statistical techniques used with the claimed invention to infer a prognosis of the *future* state of an *entire* machine. It is readily apparent that Bryant *et al.* fails to disclose or suggest anything concerning *regulating operation of a business component based at least upon prognostic data concerning a machine*. Therefore, Gotou *et al.* and Bryant *et al.*, taken alone or in combination, fail to disclose or suggest every aspect of the claimed invention. For at least these reasons, the rejection of independent claims 1, 10, 33, 39, 40, 44 and 47 (and claims that depend there from) should be withdrawn.

CONCLUSION

The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [ALBRP246USC].

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number below.

Respectfully submitted,

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